

Appl. No.: 10/718356

Amdt. Dated: September 30, 2004

Reply to Office Action of: August 25, 2004

REMARKS/ARGUMENTS

Original claims 1-20 are pending in the application. Claims 1 and 12 have been amended. Claims 3, 7-9, 14, 15, 19 and 20 have been cancelled. **New claims 21 and 22 have been added.**

With regard to new claims 21 and 22, these claims are specifically directed to a coated CaF_2 monocrystal and are similar to pending claims 10 and 11. Applicants believe that the addition of the new claims will not require an additional search and that they are allowable in view of the Examiner's comments made concerning claims 10 and 11 and other claims in the application.

Claim Rejections under 35 USC § 102

In view of the Examiner's comments concerning the allowability of selected claims in the application and the amendments submitted herein, applicants believe that the 35 USC § 102 rejection made in the Office Action are now moot. The claims have been amended in the manner suggested by the Examiner and are believed allowable. However, for completeness applicants submit the following comments.

1. 4,101,707 to Henry

With regard to Henry, applicants believe that the amended claims submitted herewith take the claims outside of any matter that may be taught by Henry. The Henry patent is directed to a multilayer dielectric mirror where the substrate is a garnet. Some of the layers are composed of materials selected from the group of MgF_2 , SiO_2 , TiO_2 , and others. Applicant does not believe that this patent is related to the present application because garnets are metal oxides, not metal fluorides as is the case with the present invention. In addition, the Henry patent does not disclose use with less than 250 nm or less than 200 nm radiation. However, Henry does mention MgF_2 as a coating material.

In the amended claims submitted herewith the coating material as are limited to MgF_2 doped fused silica and fluorine doped fused silica. Neither is taught by the Henry patent.

THEREFORE, Applicant submits that the amended claims are patentable over Henry.

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2. U.S. 5,403,673 to Haga et al.

With regard to Haga, the Haga patent is to a functional thin film member (for optical switches, light modulators, infrared light sensors and electroluminescence elements among others) composed of a first single crystal layer containing Si or Ge formed on an insulating substrate; an intermediate layer; and a second single crystal layer. SiN is mentioned as being suitable as a material for a single crystal oxide layer 4 (see column 5, line 52 to column 6, line 4, and particularly column 6, line 2). However, SiN is not an oxide. Consequently, Applicants submits that reference to this material may be an error.

Nevertheless, in the amended claims submitted herewith the coating material as are limited to MgF₂ doped fused silica and fluorine doped fused silica. Neither is taught by the Haga patent.

THEREFORE, Applicants submit that the amended claims are patentable over Haga

3. US2000/0008540 A1 to Oba et al

With regard to the Oba patent application, Oba teaches the use of a MgF₂ coated monocrystal. However, Oba does not teach or suggest the use of MgF₂ doped fused silica or fluorine doped fused silica as coating agents for any monocrystal as is taught by the present invention. Both MgF₂ doped fused silica and fluorine doped fused silica are vastly different from the coating material taught by Oba.

THEREFORE, Applicants submit that the amended claims are patentable over Oba

Based upon the above amendments, remarks, and papers of records, applicants believe the pending claims of the above-captioned application are in allowable form and patentable over the prior art of record. Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Applicants believe that no extension of time is necessary to make this Reply timely. Should applicant be in error, applicant respectfully requests that the Office grant such time extension pursuant to 37 C.F.R. § 1.136(a) as necessary to make this Reply timely, and hereby authorizes the Office to charge any necessary fee or surcharge with respect to said time extension to the deposit account of the undersigned firm of attorneys, Deposit Account 03-3325.

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Please direct any questions or comments to Walter M. Douglas at 607-974-2431.

30 September 2004
Date

CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. § 1.8	
I hereby certify that this paper and any papers referred to herein are being transmitted by facsimile to the U.S. Patent and Trademark Office at 703-872-9306 on:	
<u>30 September 2004</u> Date	
<u>Walter M. Douglas</u> Walter M. Douglas	<u>30 Sep 2004</u> Date

Respectfully submitted,
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